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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/681,195	02/16/2001	David J. Gemmell	MCS-067-00	1755

27662 7590 06/04/2004

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EXAMINER	
JACOBS, LASHONDA T	
ART UNIT	**PAPER NUMBER**
2157	

DATE MAILED: 06/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/681,195	GEMMELL, DAVID J.	
	Examiner	Art Unit	
	LaShonda T. Jacobs	2157	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 February 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-34* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-34* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *16 February 2001* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 2.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: note reference numeral 163 on pg 11 lines 3 and 14, reference numeral 164 on pg 11, lines 5 and 8 and reference numeral 165 pg 11 line 9. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: note reference numerals 192-194 of Figure 1. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

3. The disclosure is objected to because of the following informalities: on page 20, line 10 the word "wed" should be change to "web".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 1 recites the limitation "the requested layer data" in line 8. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims **1-27** and **30-34** are rejected under 35 U.S.C. 102(e) as being anticipated by Tillman et al (hereinafter, "Tillman", 6,496,980).

As per claim **1**, Tillman discloses a computer-implemented process for obtaining progressively higher quality versions of an audio and/or video program over a client-server based network, comprising a client computer performing the process actions of:

- requesting a base quality version of the program from a server over the network, wherein the base quality version of the program comprises at least a base layer of a layered unicast (abstract, col. 2, lines 47-59, col. 4, lines 54-57, col. 5, lines 25-44, col. 6, lines 14-22 and col. 10, lines 10-21);
- receiving and caching the requested layer data associated with the base quality version of the program (col. 7, lines 36-50);
- requesting at least one enhancement layer of the layered unicast from the server over the network (col. 7, lines 36-50, col. 8, lines 13-16 and col. 9, lines 11-20);

- receiving and caching the requested enhancement layer data (col. 9, lines 11-20, lines 58-67 and col. 10, lines 1-7); and
- combining the requested enhancement layer data with the previously cached layer data associated with the base quality version of the program as it is received to produce a higher quality version of the program (col. 9, lines 11-20 and lines 44-57).

As per claim **2**, Tillman further discloses:

- rendering the base quality version of the program as the requested data is received and presenting it to the user (col. 9, lines 11-20 and lines 44-57).

As per claim **3**, Tillman further discloses:

- determining if the user directs that the presentation of the base quality version of the program be terminated (col. 10, lines 57-67 and col. 11, lines 15); and
- terminating the presentation of the base quality version of the program to the user (col. 10, lines 57-67 and col. 11, lines 15).

As per claim **4**, Tillman discloses:

- wherein the process action of terminating the presentation comprises the action of terminating the incoming data stream associated with the requested base quality version of the program (col. 10, lines 57-67 and col. 11, lines 15).

As per claim **5**, Tillman discloses:

- wherein the process action of terminating the presentation comprises the actions of stopping the rendering of the base quality version of the program, while continuing to receive and cache the incoming data stream associated with the requested base quality version of the program (col. 10, lines 57-67 and col. 11, lines 15).

As per claim **6**, Tillman further discloses:

- a process action of rendering the higher quality version of the program from the combined layer data and presenting it to the user (col. 9, lines 11-20 and lines 44-57).

As per claim **7**, Tillman further discloses:

- determining if the user directs that the presentation of the higher quality version of the program be terminated (col. 10, lines 57-67 and col. 11, lines 15); and
- terminating the presentation of the higher quality version of the program to the user (col. 10, lines 57-67 and col. 11, lines 15).

As per claim **8**, Tillman discloses:

- wherein the process action of terminating the presentation comprises the action of terminating the incoming data stream associated with the requested higher quality version of the program (col. 10, lines 57-67 and col. 11, lines 15).

As per claim **9**, Tillman discloses:

- wherein the process action of terminating the presentation comprises the actions of stopping the rendering of the higher quality version of the program, while continuing to receive and cache the incoming data stream associated with the requested higher quality version of the program (col. 10, lines 57-67 and col. 11, lines 15).

As per claim **10**, Tillman discloses:

- wherein the process actions of requesting at least one enhancement layer, receiving and caching the requested enhancement layer data and combining the requested enhancement layer data with the previously cached layer data associated with the base quality version of the program as it is received to produce said higher quality version of

the program, are performed only when a user directs the client to provide a higher quality version of the program in comparison to the base quality version (col. 7, lines 36-50, col. 9, lines 11-20 and lines 44-57).

As per claim **11**, Tillman discloses:

- wherein the process actions of requesting at least one enhancement layer, receiving and caching the requested enhancement layer data and combining the requested enhancement layer data with the previously cached layer data associated with the base quality version of the program as it is received to produce said higher quality version of the program, are performed automatically once all the requested layer data associated with the base quality version of the program has been received and cached (col. 7, lines 36-50, col. 9, lines 11-20 and lines 44-57).

As per claim **12**, Tillman further discloses:

- requesting at least one additional enhancement layer of the layered unicast from the server over the network (col. 7, lines 36-50, col. 8, lines 13-16 and col. 9, lines 11-20);
- receiving and caching the requested additional enhancement layer data (col. 9, lines 11-20, lines 58-67 and col. 10, lines 1-7); and
- combining the requested additional enhancement layer data with the previously cached layer data associated with the base and higher quality versions of the program as it is received to produce an enhanced higher quality version of the program (col. 9, lines 11-20 and lines 44-57).

As per claim **13**, Tillman further discloses:

- ascertaining whether the server has any remaining enhancement layers associated with the program available (col. 10, lines 43-56); and
- whenever it is ascertained that the server has at least one remaining enhancement layer associated with the program (col. 10, lines 43-56),
- requesting at least one additional enhancement layer of the layered unicast from the server over the network (col. 7, lines 36-50, col. 8, lines 13-16 and col. 9, lines 11-20),
- receiving and caching the requested additional enhancement layer data (col. 9, lines 11-20, lines 58-67 and col. 10, lines 1-7), and
- combining the requested additional enhancement layer data with the previously cached layer data associated with the base and higher quality versions of the program as it is received to produce an enhanced higher quality version of the program (col. 9, lines 11-20 and lines 44-57).

As per claim **14**, Tillman discloses:

- wherein the process actions of requesting at least one additional enhancement layer, receiving and caching the requested additional enhancement layer data and combining the requested additional enhancement layer data with the previously cached layer data associated with the base and higher quality versions of the program to produce said enhanced higher quality version of the program, are performed only when a user directs the client to provide the enhanced higher quality version of the program (col. 7, lines 36-50, col. 9, lines 11-20 and lines 44-57).

As per claim **15**, Tillman discloses:

- wherein the process actions of requesting at least one additional enhancement layer, receiving and caching the requested additional enhancement layer data and combining the requested additional enhancement layer data with the previously cached layer data associated with the base and higher quality versions of the program to produce said enhanced higher quality version of the program, are performed automatically once all the requested layer data associated with the higher quality version of the program has been received and cached (col. 7, lines 36-50, col. 9, lines 11-20 and lines 44-57).

As per claim **16**, Tillman further discloses:

- informing the user that an enhanced higher quality version of the program cannot be provided whenever it is ascertained that the server does not have any remaining enhancement layers associated with the program available (col. 10, lines 43-56).

As per claim **17**, Tillman discloses:

- wherein the layers of the layered unicast are related hierarchically in that the lowest level layer is a base layer and each subsequently higher level layer adds enhancing information for enhancing the quality of the program that can be rendered from the layers preceding it in the hierarchy, and wherein the process action of requesting a base quality version of the program from a server over the network comprises the action of requesting as many layers, in the order of their position in the hierarchy starting with the base layer, as can be transmitted from the server to the client without exceeding the available bandwidth of the network (col. 6, lines 15-40, lines 53-67, col. 7, lines 1-3, lines 36-50, col. 9, lines 11-20 and lines 44-57).

As per claim **18**, Tillman discloses:

- wherein the process action of requesting at least one enhancement layer, comprises the action of requesting as many enhancement layers, in the order of their position in the hierarchy starting with the layer next higher in the hierarchy from the highest level layer requested in association with the base quality version of the program, as can be transmitted from the server to the client without exceeding the available bandwidth of the network (col. 6, lines 15-40, lines 53-67, col. 7, lines 1-3, lines 36-50, col. 9, lines 11-20 and lines 44-57).

As per claim **19**, Tillman discloses:

- wherein the process actions of requesting a base quality version of the program and requesting at least one enhancement layer comprises requesting that the data making up each layer be provided in its entirety (col. 7, lines 36-50, col. 9, lines 11-20 and lines 44-57).

As per claim **20**, Tillman discloses:

- wherein the process action of requesting a base quality version of the program comprises the action of requesting the data making up each layer of the base quality version in sequential, equal-sized, temporally corresponding portions such that the layer portions associated with a time segment at the beginning of the program are requested first, and then the layer portions associated with the next sequential time segment of the program are requested, and so on (col. 9, lines 11-32, lines 44-57 and col. 10, lines 43-56).

As per claim **21**, Tillman discloses:

- wherein the layers of the layered unicast are related hierarchically in that the lowest level layer is a base layer and each subsequently higher level layer adds enhancing information for enhancing the quality of the program that can be rendered from the layers preceding it in the hierarchy, and wherein the process action of requesting the data making up each layer of the base quality version in sequential, equal-sized, temporally corresponding portions comprises the action of requesting said layer portions from as many layers, in the order of their position in the hierarchy starting with the base layer, as can be transmitted from the server to the client without exceeding the available bandwidth of the network (col. 9, lines 11-32, lines 44-57 and col. 10, lines 43-56).

As per claim **22**, Tillman discloses:

- wherein the process action of requesting at least one enhancement layer of the program comprises the action of requesting the data making up each enhancement layer in sequential, equal sized, temporally corresponding portions such that the layer portions associated with time segment at the beginning of the program are requested first, and then the layer portions associated with the next sequential time segment of the program are requested, arid so on (col. 9, lines 11-32, lines 44-57 and col. 10, lines 43-56).

As per claim **23**, Tillman discloses:

- wherein the process action of requesting the data making up each enhancement layer in sequential, equal-sized, temporally corresponding portions, comprises the action of requesting said enhancement layer portions from as many enhancement layers, in the order of their position in the hierarchy starting with the layer next higher in the hierarchy from the highest level layer requested in association with the base quality

version of the program, as can be transmitted from the server to the client without exceeding the available bandwidth of the network (col. 9, lines 11-32, lines 44-57 and col. 10, lines 43-56).

As per claim **24**, Tillman discloses:

- wherein the length of each time segment of the program is matched to the rate at which the available bandwidth varies on the network such that each time segment is short enough that the network bandwidth does not vary significantly over the period (col. 5, lines 46-67, col. 6, lines 1-6 and lines 14-40) .

As per claim **25**, Tillman discloses a client-server based computer network for obtaining progressively higher quality versions of an audio and/or video program, comprising:

- a client comprising at least one general purpose computing device (col. 4, lines 31-36 and lines 54-57); and
- a computer program comprising program modules executable by the client, wherein the client is directed by the program modules to (col. 12, lines 29-34)
- receive an instruction from a user to provide the program for viewing (col. 4, lines 31-36)
- request a base quality version of the program from a server over the network, wherein the base quality version of the program comprises at least a base layer of a layered unicast (abstract, col. 2, lines 47-59, col. 4, lines 54-57, col. 5, lines 25-44, col. 6, lines 14-22 and col. 10, lines 10-21),
- receive and cache the requested layer data associated with the base quality version of the program (col. 7, lines 36-50),

- render the base quality version of the program as the requested data is received and present it to the user (col. 9, lines 11-20 and lines 44-57),
- determining if the user directs that a higher quality version of the program be provided for viewing (col. 7, lines 36-50),
- whenever it is determined that the user has directed a higher quality version of the program to be provided (col. 7, lines 36-50),
- request at least one enhancement layer of the layered unicast from the server over the network (col. 7, lines 36-50, col. 8, lines 13-16 and col. 9, lines 11-20),
- receive and cache the requested enhancement layer data (col. 9, lines 11-20, lines 58-67 and col. 10, lines 1-7),
- combine the requested Enhancement layer data with the previously cached layer data associated with the base quality version of the program as it is received to produce the higher quality version of the program, and render the higher quality version of the program from the combined layer data and present it to the user (col. 9, lines 11-20 and lines 44-57).

As per claim **26**, Tillman further discloses:

- determining if the user directs that the presentation of the base quality version of the program be terminated (col. 10, lines 57-67 and col. 11, lines 15);
- whenever it is determined that the user has directed that the presentation of the base quality version of the program be terminated, terminating said presentation (col. 10, lines 57-67 and col. 11, lines 15).

As per claim **27**, Tillman discloses a computer-readable medium having computer-executable instructions for obtaining progressively higher quality versions of an audio and/or video program over a network, said computer-executable instructions comprising:

- requesting a base quality version of the program, wherein the base quality version of the program comprises at least a base layer of a layered unicast (abstract, col. 2, lines 47-59, col. 4, lines 54-57, col. 5, lines 25-44, col. 6, lines 14-22 and col. 10, lines 10-21);
- receiving and caching the requested layer data associated with the base quality version of the program (col. 7, lines 36-50);
- rendering the base quality version of the program as the requested data is received and presenting it to the user (col. 9, lines 11-20 and lines 44-57);
- upon a user directing that a higher quality version of the program being provided, requesting at least one enhancement layer of the layered unicast from the server over the network (col. 7, lines 36-50);
- receiving and caching the requested enhancement layer data (col. 7, lines 36-50, col. 8, lines 13-16 and col. 9, lines 11-20);
- combining the requested enhancement layer data with the previously cached layer data associated with the base quality version of the program as it is received to produce a higher quality version of the program (col. 9, lines 11-20 and lines 44-57); and
- rendering the higher quality version of the program from the combined layer data and presenting it to the user (col. 9, lines 11-20, lines 44-67 and col. 10, lines 1-7).

As per claim **30**, Tillman discloses a computer-implemented process for providing progressively higher quality versions of an audio and/or video program over a client-server based network, comprising a server computer performing the process actions of:

- providing a base quality version of the program to a client computer over the network, wherein the base quality version of the program comprises at least a base layer of a layered unicast (abstract, col. 2, lines 47-59, col. 4, lines 54-57, col. 5, lines 25-44, col. 6, lines 14-22 and col. 10, lines 10-21); and
- providing at least one enhancement layer of the layered unicast to the client over the network without also providing any layer of the base quality version of the program (col. 10, lines 57-67 and col. 11, lines 1-15).

As per claim **31**, Tillman discloses:

- wherein the process action of providing a base quality version of the program comprises the action of providing the data making up each layer of the base quality version in sequential, equal-sized, temporally corresponding portions such that the layer portions associated with a time segment at the beginning of the program are provided first, and then the layer portions associated with the next sequential time segment of the program are provided, and so on (col. 9, lines 11-32, lines 44-57 and col. 10, lines 43-56).

As per claim **32**, Tillman discloses:

- wherein the process action of providing at least one enhancement layer of the program comprises the action of providing the data making up each enhancement layer in sequential, equal-sized, temporally corresponding portions such that the layer portions associated with time segment at the beginning of the program are provided first, and

then the layer portions associated with the next sequential time segment of the program are provided, and so on (col. 9, lines 11-32, lines 44-57 and col. 10, lines 43-56).

As per claim **33**, Tillman discloses a client-server based computer network for providing progressively higher quality versions of an audio and/or video program, comprising:

- a server comprising at least one general purpose computing device (col. 5, lines 13-24); and
- a computer program comprising program modules executable by the server, wherein the server is directed by the program modules to (col. 11, lines 25-34),
- upon a first request from a client computer over the network to provide the program, provide a base quality version of the program to a client computer over the network, wherein the base quality version of the program comprises at least a base layer of a layered unicast (abstract, col. 2, lines 47-59, col. 4, lines 54-57, col. 5, lines 25-44, col. 6, lines 14-22 and col. 10, lines 10-21), and
- upon a subsequent request from a client computer over the network to provide a higher quality version of the program, providing at least one enhancement layer of the layered unicast to the client over the network without also providing any layer of the base quality version of the program (col. 7, lines 36-50, col. 9, lines 11-20 and lines 44-57).

As per claim **34**, Tillman discloses a computer-readable medium having computer-executable instructions for providing progressively higher quality versions of an audio and/or video program over a client-server based network, said computer-executable instructions comprising:

- providing a base quality version of the program to a client computer over the network, wherein the base quality version of the program comprises at least a base layer of a layered unicast (abstract, col. 2, lines 47-59, col. 4, lines 54-57, col. 5, lines 25-44, col. 6, lines 14-22 and col. 10, lines 10-21); and
- providing at least one enhancement layer of the layered unicast to the client over the network without also providing any layer of the base quality version of the program, wherein the at least one enhancement layer is a layer capable of being combined with the layer or layers of the base quality version of the program previously provided to produce said higher quality version of the program (col. 7, lines 36-50, col. 9, lines 11-20 and lines 44-57).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claims **28** and **29** are rejected under 35 U.S.C. 103(a) as being unpatentable over Tillman in view of Chaddha (6,266,817).

As per claim **28**, Tillman discloses a process of using a computing device to provide progressively higher quality versions of an audio and/or video program over a client-server based network, comprising a server computer performing the process actions of:

- upon a first request from a client computer over the network to provide the program, providing a base quality version of the program to the client over the network, wherein the base quality version of the program comprises at least a base layer of a layered unicast (abstract, col. 2, lines 47-59, col. 4, lines 54-57, col. 5, lines 25-44, col. 6, lines 14-22 and col. 10, lines 10-21); and
- upon a subsequent request from a client computer over the network to provide a higher quality version of the program (col. 7, lines 36-50, col. 9, lines 11-20 and lines 44-57).

However, Tillman does not explicitly disclose:

- requesting payment of a prescribed fee,
- providing at least one enhancement layer of the layered unicast to the client over the network upon payment of the prescribed fee.

Chaddha discloses a decoder for a software-implemented end-to-end scalable video delivery system including:

- requesting payment of a prescribed fee (col. 12, lines 7-17); and
- providing at least one enhancement layer of the layered unicast to the client over the network upon payment of the prescribed fee (col. 12, lines 7-17).

Given the teaching of Chaddha, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Tillman by including a payment for services plan allowing a user to pay for a given service received from the service in a timely and efficient manner.

As per claim **29**, Tillman discloses the invention substantially as claimed.

However, Tillman does not explicitly disclose:

- wherein the process action of requesting payment of the prescribed fee is performed only upon a first request from a client computer over the network to provide a higher quality version of the program, and is not repeated thereafter.

Chaddha discloses a decoder for a software-implemented end-to-end scalable video delivery system including:

- wherein the process action of requesting payment of the prescribed fee is performed only upon a first request from a client computer over the network to provide a higher quality version of the program, and is not repeated thereafter (col. 12, lines 7-17).

Given the teaching of Chaddha, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Tillman by including a payment for services plan allowing a user to pay for a given service received from the service in a timely and efficient manner.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Pat. No. 6,510,553 to Hazra

U.S. Pat. No. 5,621,660 to Chaddha et al

U.S. Pat. No. 6,141,053 to Saukkonen

U.S. Pub. No. 2002/0049979 to White et al

U.S. Pub. No. 2003/0197785 to White et al

U.S. Pub. No. 2002/0107969 to Waldvogel et al

U.S. Pat. No. 6,337,881 to Chaddha

U.S. Pat. No. 6,392,705 to Chaddha

U.S. Pat. No. 6,637,031 to Chou

U.S. Pat. No. 6,594,798 to Chou et al

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LaShonda T. Jacobs whose telephone number is 703-305-7494. The examiner can normally be reached on 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on 703-308-7562. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LaShonda T. Jacobs
Examiner
Art Unit 2157

ltj
May 21, 2004

ARIO ETIENNE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100